

In re Patent Application of:

LENOBLE

Serial No. 10/714,440

Filing Date: NOVEMBER 14, 2003

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REMARKS

The Examiner is thanked for thorough examination of the present application. The patentability of the claims is discussed in greater detail below. Favorable reconsideration is respectfully requested.

I. The Claimed Invention

Independent Claim 25, for example, is directed to a process for fabricating an integrated circuit comprising forming a gate on a silicon substrate, and implanting dopants in the silicon substrate to form drain and source extensions therein. The process also comprises amorphizing regions of the silicon substrate to obtain amorphous silicon regions adjacent the gate after implanting the dopants. The process further comprises forming drain and source regions in the respective drain and source extensions with a channel being defined therebetween with the drain and source regions being formed at a temperature below 800°C.

Independent Claim 54 is similar to Claim 25, but recites the drain and source regions being formed at a relatively low temperature to avoid diffusion of the dopants from the drain and source extensions.

II. All The Claims Are Patentable

The Examiner rejected independent Claims 25 and 54 as unpatentable over the Chidambaram et al. patent in view of the Yu patent. The Chidambaram et al. patent discloses that the amorphization implant is performed prior to the dopant

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implantation and then the substrate is annealed. The annealing causes the amorphized regions and the doped extension regions to repair.

The Examiner notes the Chidambaram et al. patent fails to disclose the drain and source regions being formed at a temperature below 800 degrees Celsius and looks to the Yu patent to provide such. The Yu patent discloses that the dopant is implanted and then the substrate is annealed before the amorphization implantation is performed.

The proposed selective combination of the Chidambaram et al. and Yu patents is improper because the primary reference teaches away from such for two reasons. Firstly, the Chidambaram et al. patent discloses the amorphization implant is performed prior to the dopant implantation and then the substrate is annealed, which is the inverse of what the Yu patent teaches. In other words, the Chidambaram et al. process and the Yu process are two different processes. And secondly, the Chidambaram et al. patent teaches that the annealing process "is performed at a temperature of about 900 degrees Celsius or more and about 1075 degrees Celsius or less" as described at column 6, lines 29-36. The Chidambaram et al. patent fails to disclose that this stated range can somehow be different.

Moreover, the Yu patent fails to address the Chidambaram et al. process. It is therefore respectfully submitted that no proper motivation is supplied by the cited references or the Examiner to support the contention that the

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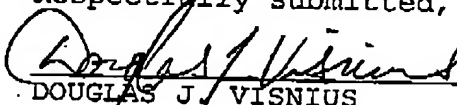
Chidambaram et al. process should be performed below the temperature range disclosed by the Chidambaram et al. patent.

Accordingly, it is submitted that independent Claims 25 and 54 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

CONCLUSIONS

In view of the arguments presented above, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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